

## CLAIMS

We claim:

- 5        1. A composition comprising one or more isolated, synthetic or recombinant larval *T. solium* polypeptides or antigenic fragments thereof, immunoreactive with *T. solium* antibodies.
- 10        2. The composition of Claim 1 wherein the polypeptides are selected from the group consisting of TS-14, TS-18 and TSRS-1.
- 15        3. The composition of Claim 1 wherein the polypeptides have amino acid sequences selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4 and SEQ ID NO:6.
- 20        4. The composition of Claim 1 wherein the polypeptide fragment contains the amino acid sequence set forth in SEQ ID NO:7.
- 25        5. The composition of Claim 1 wherein the polypeptides are encoded by nucleic acid molecules having nucleic acid sequences selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and SEQ ID NO:5.
- 30        6. An isolated nucleic acid molecule having a sequence encoding a larval *Taenia solium* polypeptide, wherein the nucleic acid sequence encodes a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4 and SEQ ID NO:6.
- 35        7. An isolated nucleic acid molecule having a sequence encoding a larval *Taenia solium* polypeptide, wherein the nucleic acid sequence is selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and SEQ ID NO:5.
- 40        8. A method for detecting *T. solium* antibodies in an biological sample comprising combining the sample with one or more recombinant or

5 synthetic larval *Taenia solium* polypeptides, or antigenic fragments thereof, immunoreactive with *T. solium* antibodies and detecting the formation of a complex between the polypeptides or fragments thereof and antibodies in the sample, wherein the presence of an antibody-polypeptide complex indicates the presence of *T. solium* antibodies in the sample.

10 9. The method of Claim 8 wherein the polypeptides are selected from the group consisting of TS-14, TS-18 and TSRS-1.

10 10. The method of Claim 8 wherein the polypeptides have amino acid sequences selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4 and SEQ ID NO:6.

15 11. The method of Claim 8 wherein the polypeptide fragment contains the amino acid sequence set forth in SEQ ID NO:7.

20 12. The method of Claim 8 wherein the polypeptides are encoded by nucleic acid molecules having nucleic acid sequences selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and SEQ ID NO:5.

25 13. A method for diagnosing cysticercosis in a mammal comprising contacting a biological sample of the mammal with one or more synthetic or recombinant larval *Taenia solium* polypeptides, or antigenic fragments thereof, immunoreactive with *T. solium* antibodies, and detecting the binding of antibody present in the biological sample to a *Taenia solium* glycoprotein antigen, wherein the detection of binding indicates cysticercosis.

30 14. The method of Claim 13 wherein the polypeptides have an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4 and SEQ ID NO:6.

35 15. The method of Claim 13 wherein the polypeptide fragment contains the amino acid sequence set forth in SEQ ID NO:7.

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16. The method of Claim 13, wherein the polypeptides are encoded by nucleic acid molecules having nucleic acid sequences selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and SEQ ID NO:5.

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